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EXAMINER	
HOANG, THAI D	

ART UNIT	PAPER NUMBER
2667	6

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

Office Action Summary	Application No.	Applicant(s)	
	09/530,577	NAZARI, ALA	
	Examiner	Art Unit	
	Thai D Hoang	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Application filed on 10/18/2000* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Objections

1. Claims 6-26 and 34-50 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only and cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 6-26 and 34-50 have not been further treated on the merits.

Specification

2. The disclosure is objected to because of the following informalities:

The headings were missing in the specification such as the background or related art of the invention, summary of the invention, and brief description of the drawings, etc...

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or

REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(e) BACKGROUND OF THE INVENTION.
  (1) Field of the Invention.
  (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9-10, 13-14, 17, 19, 21-24, 30-31, 36-37, 40, 42, 45-47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The statements "VC is found to be inactive", "VC list becomes empty", "VC is identified", "VC is not identified", "VC found to be idle" in many claims, such as 9-10, 13-14, 17, 19, 21-24... are confusing because the specification and claims do not define how a virtual channel "active", "inactive", "empty", "not identified" or "idle" is.

All of claims depend on rejected claims cited above are rejected.

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 34 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claim 34, the statement "forcing all down stream VCs...to be timed out" does not describe in the specification (page 18). The specification does not explain how the system "forcing" does.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-5, 26 and 50 are rejected under 35 U.S.C. 102(e) as being unpatentable over Civanlar et al, US Patent No. 5,996,021, hereafter referred to as Civanlar.

Regarding claim 1, Civanlar discloses an Internet protocol relay network for directly routing datagram from ingress router to egress router. Civanlar teaches that the network is an IP over ATM network comprising an edge and a core. The edge includes a plurality of ingress and egress routers 110-115 (access IP/ATM node - AINs) and the core includes a plurality of switches network 120-123 (core IP/ATM node - CINs). The ingress router communicates with and receives an IP packet from a source network 100-105. The ingress router attaches to each IP packet, a globally unique label which is used to forward the IP packet across the ATM network. The relay switch network communicates with the ingress router, receives the IP packet from the ingress router and forwards the IP packet along its transmission path based on destination information included in its attached label. The egress router receives the IP packet from the ATM switch network and forwards it to a destination network. Once received, the destination network forwards the IP packet to its intended destination. Each of the switches 120-123 in the system disclosed by Civanlar inherently comprise an interface in order to allow IP packets go to a destination through the ATM switch network by mapping a label corresponding to an IP header; abstract; figures 3; col. 1, line 50 – col. 3, line 54; col. 5, line 64 – col. 7, line 47 (An ATM transmission system, adapted for the transmission of IP data and including a core network of ATM switches, said ATM transmission system being adapted to handle inter-subnet communications, characterized in that said core

network includes access IP/ATM nodes (AINs) and core IP/ATM nodes (CINs) for handling said intersubnet communications, in that each AIN is attached to an ATM switch of the core network through an ATM User-Network Interface (UNI) and is adapted to perform IP data flow classification and labelling for facilitating mapping of IP data flows to ATM VCs, and to communicate with IP/ATM hosts and routers, in that each CIN is attached to an ATM switch of the core network through an ATM UNI and is adapted to perform routing and labelling, in that said AINs and CINs are interconnected through Virtual Path Connections (VCPs), and in that permanent VCPs are set-up between adjacent CINs.)

Regarding claims 2-3, Civanlar discloses that the routers 110-115 (AINs) are adapted to communicate with hosts 90 and 95 connected to LANs 101-105. It implies that the routers 110-115 (AINs) are adapted to communicate with non-ATM hosts; col. 5, line 64 – col. 6, line 12.

Regarding claims 4-5, figure FIG. 1 of the network disclosed by Civanlar illustrates a schematic view of classical IP over ATM. By way of example, source host 10 wishes to send a packet to destination host 20 which is outside the local IP subnet ("LIS") of the source host 10. The IP routers 11, 14, and 17 and the ATM switches 12, 15, and 18 run separate protocols to determine the address of the next hop. Moreover, each router along the packet's transmission path determines the next hop router toward its destination. This requires each router to perform Layer-3 processing on the packet to inspect the destination IP address and derive the next hop router from routing tables determined by a routing protocol and stored in each router . Furthermore, this system

also includes IP to ATM address mapping steps, one in each ARP server, and four ATM switched virtual path (SVC) establishment steps along the path between the source host 10 and destination host 20, thereby adding more processing steps to the routing scheme; col. 1, lie50 – col. 2, line 35, and col. 2, line 45 - col. 3, line 5 (the inter-subnet communications are effected on a hop-by-hop basis, and in that said ATM transmission system is adapted to map each IP data flow into an ATM Virtual Circuit (VC) for each hop, between nodes, on the communication path towards a destination subset; the ATM VC for each hop between nodes is a VCI selected from a VPC connecting the two nodes.)

Regarding claim 26: Claim 26 depends on claim 1 (assumed). As best understood, Civanlar discloses that a FLOW ID of the label may also be included in the label to differentiate between multiple IP packets bound for the same destination. This allows IPRSs along the IP packet's transmission path to provide different quality of service treatment to different IP packets. Therefore, it indicates that the system disclosed by Civanlar used information in the type of service filed of the IP header to set up the flow ID of the label for indicating a data rate of the data packet transmitted to a destination through a virtual channel.

Claim 50 depends on claim 1 (assumed). Civanlar teaches that the network is a IP over ATM network.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6.1 Claims 6-14, 17, 19-25, 27-32, 34-37, 40 and 42-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Civanlar et al, US Patent No. 5,996,021, in view of Feldman et al, US patent No. 6,130,889, hereafter referred to as Civanlar and Feldman respectively.

Regarding claims 6-7, 12-13, 21, 27-28, 35-36 and 44: Claims 6 and 12-13 depend on claim 1; claims 35-36 depend on claim 27 (assumed). As best understood, Civanlar discloses that the IPRR-100 checks to determine if there is a forwarding table entry in its database for the LAST IPRR ID. If the test result is YES, it checks to determine if it is the last hop too the destination station in conditional branch point 271. If the test result is YES, then the IPRR removes the label and forwards the IP datagram to its final destination in step 291; fig. 4, col. 10, lines 14-20. Civanlar does not disclose that the method comprises the steps of decrement a TTL (Time To Live) timer, discarding the IP data packet if the timer reaches zero, compute the IP data packet header checksum. However, Feldman discloses a method and system for Determining and maintaining hop-count for switched networks. Feldman teaches that before forwarding a packet on a switched path, an ingress ISR decrements the TTL by the hop-count. In this way, at the switched path exit point, the TTL is the same as if it had been forwarded by IP. If the decrement value is greater than or equal to the TTL of the packet, the packet may be forwarded hop-by-hop; in this situation, the packet will be discarded at the correct IP node, rather than being switched through the ATM like

network; abstract. In addition Feldman teaches that the system comprises the step of computing the checksum field in the IP header, col. 16 (bottom) and col. 18 (1st line). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the checksum disclosed by Feldman into Civanlar's method in order to improve the quality of the data packet transmitted to a destination, and adapt the TTL disclosed by Feldman into Civanlar's method in order to optimize the bandwidth for transmission and avoid arrant data packet circle forever in a "close loop".

Regarding claims 8 and 29, as best understood, Civanlar teaches that each IP router between the source and destination inspects the inserted tag and makes a determination, based on local look-up tables, which port to forward the IP datagram. Each router establishes a table entry in its database indicating that for a particular tag, the datagram originates from a first router and should be forwarded onto a particular port to a second router. In addition, Civanlar teaches that if the data link layer is ATM, each router inspects the VPI/VCI value at the packet's header to make a forwarding decision. The tag switching involves swapping VPI/VCI values between incoming and outgoing ports of each router on an IP packet's transmission path; col. 4, lines 22-29 and 38-43 (each entry in said labelling table includes a subnet address, the outgoing VC (VPI/VCI) to reach the subnet). Civanlar does not teach the method comprise a step of timing for the VC, and in that the timer is adapted to be started whenever IP packets are sent on the VC. However, Feldman teaches this feature. Feldman discloses that before forwarding a packet on a VC, an ingress ISR decrements the TTL by the hop-count plus one. If the decrement value is greater than or equal to the TTL of the packet, the packet

is forwarded hop-by-hop; col. 11, lines 27-30, abstract. It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt the TTL disclosed by Feldman into Civanlar's method for advantages cited above with respect to claim 6.

Regarding claims 9-11, 14, 22, 30-32, 37 and 45: Claim 9 depends on claim 6 (assumed). As best understood, in fig. 3 Civanlar describes a process beginning by source host 30 sending an NHRP request to NHS 34 stored in router 41 via path-1a to obtain the mapping of the IP address of destination 40 to its corresponding ATM address. However, if NHS 34 does not have the address of destination 40, it must forward the NHRP request to NHS 35 stored in router 42 via path-2a. This process continues to NHS 36 stored in router 43 via path-3a which is the last NHS on the transmission path to the destination 40 via path-4a. The NHRP response which carries the ATM address of destination 40 follows the reverse path back to source 30 and gets forwarded to source host 30 by NHS 34. Thereafter, source host 30 builds a virtual path to the destination without going through routers 41, 42 and 43 along the transmission path between source 30 and destination 40; col. 3, lines 14-37. Civanlar teaches that the IPRR may choose among these alternate ports available to route the IP packet to the egress IPRR based on its local algorithm; col. 9, lines 25-27; in addition, Feldman discloses that a virtual path switching is selected based on either a good number of VCIs may be left unused, or a scheme to reuse the VCIs in another context must be devised; col. 16, lines 1-3. Furthermore, Civanlar teaches that the routing table in each IPRS and IPRR are also dynamically updated based on the topology or link-state of the

network; col. 9, lines 54-56; col.11, lines 31-48 (in the event that an existing ATM VC is not identified, said AIN is adapted to identify the next hop on the path to the destination subnet, by consulting its forwarding table, and to chose, and send the IP packet on, a free VCI from the VPC to the next hop, and in that said AIN is adapted to update its labelling table by making an entry containing the destination subnet address and the chosen VC). Civanlar does not teach that the system restarts the entry's timer, the timer having a lifetime value for the VC. However, Feldman teaches this feature as cited above with respect to claim 6. It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt the timer to set TTL disclosed by Feldman into Civanlar's method for advantages cited above with respect to claim 6 and adapt the method of reusing an available VP or VC disclosed by Feldman to Civanlar's system in order to utilize maximum bandwidth capacity of the system.

Regarding claims 17, 23, 40 and 46: Claims 17, 23 depend on claim 14, and claims 40, 46 depend on claim 37 (assumed). As best understood, Feldman discloses that the method solves the problem of cell interleaving in the case of ATM by Virtual Path switching, in which either a good number of VCIs may be left unused, or a scheme to reuse the VCIs in another context must be devised; col. 16, lines 1-3. Therefore, it indicates that Feldman's system periodically monitors the cross-connected VCs in order to disconnect any VC found to be idle.

Regarding claims 19, 42 and 47: Claim 19 depends on claim 17, claim 42 depends on claim 40 (assumed). As best understood, Feldman discloses that the method solves the problem of cell interleaving in the case of ATM by Virtual Path

switching, in which either a good number of VCIs may be left unused, or a scheme to reuse the VCIs in another context must be devised; col. 16, lines 1-3. Civanlar teaches that the routing table in each IPRS and IPRR are also dynamically updated based on the topology or link-state of the network; col. 9, lines 54-56; col.11, lines 31-48. One of ordinary skill in the art would be able to modify Civanlar's system by adding to it a function of monitoring VC channels (un-use and reuse) status before update routing table. One of ordinary skill in the art would motivated to do this because of advantages cited above with respect to claim 9.

Regarding claims 20 and 43: Claim 20 depends on claim 13 and claim 43 depends on claim 36 (assumed). As best understood, Civanlar teaches that the system The IPRR that receives the IP packet from a LAN for transmission over the network is known as the "ingress" IPRR. Based on the information contained in the address header of a particular IP packet, the ingress IPRR attaches a fixed length header referred to as a "label". This label will be read by one or more IPRS's 120-125 as the IP packet is forwarded over the network toward its destination; col. 6, lines 36-43 (a list of all incoming VCs; the outgoing VC towards a destination subnet, and the outgoing VC is established when a new entry is created in the labelling table; and the destination subnet address). Civanlar does not teach that the method comprises the steps of merging the incoming VCs and timing for each incoming VC. However, Feldman teaches that some ATM switching components can `merge` multiple inbound VCs onto one outbound VC at close to standard switching rates. These merge-capable components are able to reassemble cells from the inbound VCs into frames, and inject

the frames into the outbound VC, without interleaving cells from different frames. Furthermore, Feldman discloses that each VC is set a TTL value as cited above with respect to claim 6. It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt the timer to set TTL and the method of merging the VCs disclosed by Feldman into Civanlar's method for advantages cited above with respect to claim 9.

Regarding claim 24, as best understood, Civanlar describes a process beginning by source host 30 sending an NHRP request to NHS 34 stored in router 41 via path-1a to obtain the mapping of the IP address of destination 40 to its corresponding ATM address. However, if NHS 34 does not have the address of destination 40, it must forward the NHRP request to NHS 35 stored in router 42 via path-2a. This process continues to NHS 36 stored in router 43 via path-3a which is the last NHS on the transmission path to the destination 40 via path-4a. The NHRP response which carries the ATM address of destination 40 follows the reverse path back to source 30 and gets forwarded to source host 30 by NHS 34. Thereafter, source host 30 builds a virtual path to the destination without going through routers 41, 42 and 43 along the transmission path between source 30 and destination 40; col. 3, lines 14-37, Furthermore, Civanlar teaches that the forwarding table in each IPRS and IPRR are also dynamically updated based on the topology or link-state of the network. Thus, when the topology of the network changes by the addition or subtraction of IPRRs and/or IPRSs, the optimal paths across the core network may change and the forwarding tables change accordingly; col. 9, lines 54-59; col. 11, lines 31-48. Therefore it implies that in case of

an incoming VC is found to be inactive, said CIN is adapted to purge the corresponding outgoing VC from its labelling table, the incoming VC being cross-connected back to the CIN via a VP link on the CIN/ATM switch interface, and in that, in the event that the VC list becomes empty, said CIN is adapted to return the purged outgoing VC to its labeling table, and to delete the entry for the subnet from the labelling table.

Regarding claims 25 and 48: claim 25 depends on claim 13 and claim 48 depends on claim 36 (assumed). As best understood, Civanlar teaches that two different PORT ID's, namely PORT ID(1) and PORT ID(2) can be used since there may be several alternate (least-cost) paths to an IP packet's destination. For example (fig. 3), the forwarding table in IPRR 110 may have a PORT ID(1) corresponding to IPRS 120 and a PORT ID (2) corresponding to IPRS 121. If the egress IPRR is IPRR 112, then ingress IPRR 110 can forward the packet to either IPRS 120 or IPRS 121 depending on the IP traffic currently being sent over the network which impacts the least-cost path to egress IPRR 112 for that particular IP packet. The IPRR may choose among these alternate ports available to route the IP packet to the egress IPRR based on its local algorithm; col. 9, lines 18-27. Furthermore, Civanlar teaches that the forwarding table in each IPRS and IPRR are also dynamically updated based on the topology or link-state of the network. Thus, when the topology of the network changes by the addition or subtraction of IPRRs and/or IPRSs, the optimal paths across the core network may change and the forwarding tables change accordingly; col. 9, lines 54-59; col. 11, lines 31-48. Therefore, it implies that in the event of rerouting of an IP packet, the CIN is adapted to assign new VCs to the affected subnet addresses in its labelling

table, based on new routes for the IP packet, the old VCs, after being timed out, being re-entered in the labelling table as free VCs.

Regarding claim 34, as best understood, Feldman discloses that the method solves the problem of cell interleaving in the case of ATM by Virtual Path switching, in which either a good number of VCIs may be left unused, or a scheme to reuse the VCIs in another context must be devised; col. 16, lines 1-3. Furthermore, Feldman teaches that the system refreshes VC periodically; col. 7, lines 33-35. In addition, Civanlar teaches that the forwarding table in each IPRS and IPRR are also dynamically updated based on the topology or link-state of the network. Thus, when the topology of the network changes by the addition or subtraction of IPRRs and/or IPRSs, the optimal paths across the core network may change and the forwarding tables change accordingly; col. 9, lines 54-59; col. 11, lines 31-48. One of ordinary skill in the art would be able to modify Civanlar's system by adding to it a function of monitoring VC channels (un-use and reuse) status before update routing table. One of ordinary skill in the art would motivated to do this because of advantages cited above with respect to claim 9.

Regarding claim 49: Claim 49 depends on claim 27 (assumed). As best understood, Civanlar discloses that a FLOW ID of the label may also be included in the label to differentiate between multiple IP packets bound for the same destination. This allows IPRSs along the IP packet's transmission path to provide different quality of service treatment to different IP packets. Therefore, it indicates that the system disclosed by Civanlar used information in the type of service filed of the IP header to set

up the flow ID of the label for indicating a data rate of the data packet transmitted to a destination through a virtual channel.

6.2 Claims 15-16, 18, 38-39 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Civanlar et al, US Patent No. 5,996,021, in view of Feldman et al, US patent No. 6,130,889, and further in view of the article "Switchlets and Dynamic Virtual ATM Networks" published by van der Merwe, J. E., and Leslie, I. M.; hereafter referred to as Civanlar, Feldman and Mewer respectively.

Regarding claims 15, 18, 38 and 41, as best understood, both Civanlar and Feldman do not explicitly disclose that the system comprises an Ariel interface to transmit IP packers over an ATM switch network. However, Merwe teaches this feature in his publication pages 3-12. It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt Ariel interface disclosed by Merwe into the network disclosed by Civanlar for allowing different control architectures (ATM and IP) to be operational within the same network and on the same switch.

Regarding claims 16 and 39, Civanlar discloses in figures 1-3 that the data packets are transmitted hop-by-hop. Each of IPRSs is connected with two neighbor switches one on an input side and one in an output side (cross-connected VCs are the VCIs of the incoming and outgoing Virtual Path (VP) links between said CIN's ATM switch and its two neighbouring ATM switches, one on an input side of, and the other on an output side of, said CIN's ATM switch).

6.3 Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Civanlar et al, US Patent No. 5,996,021, in view of Feldman et al, US patent No. 6,130,889, and

further in view of publication "How to analyze LAN traffic over ATM" published by Radcom Ltd.; hereafter referred to as Civanlar, Feldman and Radcom respectively.

Regarding claim 33: Claim 33 depends on claim 30 (assumed). As best understood, both Civanlar and Feldman do not explicitly disclose that the system uses VC multiplexing (null encapsulation) of IETF RFC 1483 to encapsulate IP packets sent on said ATM VCs. However, Radcom teaches this feature on pages 1-3 of the publication. It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt the VC-based multiplexing method disclosed by Radcom into Civanlar's system in order to improve the system since the method is the most efficient way of encapsulation in term of PDU size and over head required.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art with respect to the application:

US Patent No. 5,903,559 A, Acharya et al disclose a method for Internet Protocol switching over fast ATM cell transport.

US Patent No. 6,167,051 A, Nagami et al disclose a method for packet transfer over virtual connection oriented Network.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai D Hoang whose telephone number is (703) 305-3232. The examiner can normally be reached on Monday-Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (703) 305-4378. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

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8/21/03